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AS

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/147,813	08/31/99	BRAVET	J 124707960VPC

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EXAMINER

PAULRAJ, C

ART UNIT

PAPER NUMBER

1773

9

DATE MAILED:

09/13/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

<p align="center">Office Action Summary</p>	<p>Application No.</p> <p>09/147,813</p>	<p>Applicant(s)</p> <p>BRAVET ET AL.</p>	
	<p>Examiner</p> <p>Christopher G. Paulraj</p>	<p>Art Unit</p> <p>1773</p>	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- 1) ☐ Responsive to communication(s) filed on _____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 40-62 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 40-62 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some * c) ☐ None of the CERTIFIED copies of the priority documents have been:
1. ☐ received.
2. ☐ received in Application No. (Series Code / Serial Number) _____.
3. ☐ received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

Attachment(s)

- | | |
|---|--|
| 15) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 18) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s) _____ |
| 16) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 19) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 17) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 20) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The amendment filed on June 13, 2000 has been entered. Claims 40-62 are pending.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Applicant's arguments with respect to claims 18-39 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

4. Claims 40-62 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The phrase "optical quality equivalent to that of a window" recited in claim 40, line 2, is considered indefinite because a standard for determining this optical quality has not been provided in the claims or specification.

Claim 40 also requires that the layer b.) have a thickness of 10 to 100 mm. However, the specification does not provide support for this. Applicant may have intended to limit the thickness of this layer to 10 to 100 μm , which is the thickness range supported in the specification (page 4, lines 4-5). For examination purposes, this is assumed to be a typographical error and the thickness requirement of this layer will be considered to be between 10 and 100 μm .

Claim 41 includes a Markush group of thermoplastic materials that can be used for layer a). However, in proper format, the list should include only one "or" before the final element of the group. Furthermore, applicants recite the element "ethylene/vinyl acetate" twice in this group. The phrase "capable of giving the assembly the required transparency and optical quality" is considered indefinite because neither the claims or specification provide a standard for determining this requirement.

Claim 43 requires a functional layer interspersed between plastic films b). However, since plastic layer b) is only one layer, it is not clear what is the other layer that the functional layer is interspersed between. It is also not clear exactly what constitutes a "functional layer" as required by this claim. The specification does not define this term and is therefore considered indefinite.

Claim 53 requires that the window is prepared by "providing the constituent elements of said skin layer" and "optionally consolidating them". It is not made clear exactly what the "constituent elements of the skin" are, as required by the claim. It is also not made clear how these elements are to be optionally consolidated.

Claim Rejections - 35 USC § 103

5. Claims 40-45 , 49, 52, and 62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Motter et al. (U.S. Patent number 4,112,171) in view of Hirmer (U.S. Patent number 5,525,401).

Motter et al. has been discussed in the Office Action mailed March 16, 2000. Motter et al. discloses a multilayer automotive glazing in which a transparent substrate

is coated with a plastic layer with a scratch-resistant coating thereon. In the response filed June 13, 2000, Applicants argue that the entire disclosure and teachings of is directed to a glass window and neither teaches, within the meaning of 35 U.S.C. 102, nor even makes obvious under 35 U.S.C. 103, a glass-free motor vehicle window as required by the instant claims. This is not considered persuasive. While the examples disclosed by Motter et al. utilize a glass material as the transparent substrate, the reference clearly states that "an all-plastic structure" may be used for this purpose (col. 1, lines 36-38). One skilled in the art would have found it obvious to substitute the glass substrate disclosed by Motter et al. for an all-plastic structure. The motivation for doing so would have been to reduce the overall weight of the automotive glazing. For example, Hirmer discloses that motor vehicle windows can be made using plastic materials, such as polycarbonate, in lieu of glass in order to reduce the weight (col. 1, lines 20-25).

Applicants also make the argument that in the window, the maximum thickness of the corresponding glass layer is about 1/2 the thickness of the plastic layer a.). To support this, applicants point out that the thickness of layer 19 in figure 4 is only 381 microns. However, the layer corresponding to the applicant's plastic layer a.) is the glass substrate 16. Motter et al. discloses that the thickness of glass substrate may vary from approximately 0.040 inches (1.016 mm) up to 1/8 inch (3.175 mm) and beyond (col. 3, lines 60-65). One of ordinary skill in the art would have found it obvious to adjust this thickness to between 5 and 10 mm, as required by the instant claims. The motivation for doing so would have been to increase the overall strength of the

laminated glazing. For example, Hirmer discloses that the relatively thick substrate layer used to make his motor vehicle windows has a thickness within an operative range of 50 to 500 mils (1.27 to 12.7 mm) (col. 3, lines 53-54).

6. Claims 46 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Motter et al. in view of Hirmer as applied to claim 40 above, and further in view of Bier et al. (U.S. Patent number 5,849,414).

Bier et al. has been discussed in the Office Action mailed March 16, 2000. It would have been considered obvious to one of ordinary skill in the art to add hydrophobic fluorinated silanes to the hard coating layer of Motter et al. The motivation for doing so would have been to impart water-resistant properties to the laminated glazing.

7. Claims 48, 50, and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Motter et al. in view of Hirmer as applied to claim 40 above, and further in view of Oliver et al. (U.S. Patent number 4,634,637).

Oliver et al. has been discussed in the Office Action mailed March 16, 2000. Oliver et al. discloses solar control film that is to be laminated onto a motor vehicle window structure. The reference discloses that decorative layers such as film died in a vignette pattern are known to be applied to motor vehicle windows (col. 1, lines 30-35). Oliver et al. also discloses that the solar control film can also include optically selective metal layers with a thickness between 2 and 35 nm separated by dielectric layers (col.6-col.7). It would have been considered obvious to one of ordinary skill in the art to apply a laminated structure with decorative and/or optically selective layers onto a motor

vehicle window. The motivation for doing so would have been to enhance the appearance and/or the optical properties of the laminated glazings.

8. Claims 53-61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Motter et al. in view of Hirmer as applied to claim 40 above, and further in view of Tatebayashi (U.S. Patent number 4,386,042).

Tatebayashi has been discussed in the Office Action mailed March 16, 2000. Tatebayashi discloses a process for making a synthetic resin article having a hard coating. Tatebayashi discloses a wide variety of potential applications including transparent articles such as windows for meters and clocks, and lenses or covers for automobile headlights (col. 1, lines 10-20). It would have been considered obvious to use the disclosed method to make motor vehicle windows, such as that disclosed by Motter et al., as well. Tatebayashi discloses a process in which a plastic film is coated with a hardcoating layer and then subjected to a heat treatment/curing step (col. 3, lines 25-40). The hardcoating layer can be applied by means of a spray coating or immersion coating technique (col.2, lines 23-25). The heat treatment step in the example is disclosed to occur at a temperature of about 130°C (col. 6, line 54). Tatebayashi discloses that the molded part can be subjected to a complete heat-forming process in accordance with the desired form of the metal mold cavity within the metal mold (col. 10, lines 13-18). Since the shaping process can occur within a heated mold, the hardcoating layer will be at least partly crosslinked at the same time the article is shaped. While Tatebayashi does not disclose that the heat treatment occur at a temperature of from 140°C to 240°C, one of ordinary skill in the art would have found it

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obvious to adjust the temperature to this level. The motivation for doing so would have been to impart better chemical/physical properties to the hardcoating layer. Since the process referred to by Tatebayashi involves injecting a resin material into a cavity of a mold (col. 7, lines 12-15), the mold is considered to be a frame open at its center. One of ordinary skill in the art would have also found it obvious to include other functional layers, such as those disclosed by Motter et al. and Oliver et al., in addition to the scratch resistant hardcoating layer prior to the shaping step. The motivation for doing so would have been to impart better physical/chemical properties of the laminated glazing structure.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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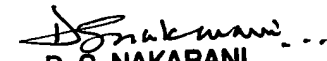
the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher G. Paulraj whose telephone number is (703) 308-1036. The examiner can normally be reached on Monday-Friday, 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul J. Thibodeau can be reached on (703) 308-2367. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7718 for regular communications and (703) 305-3601 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-0661.

cgp
August 23, 2000


D. S. NAKARANI
PRIMARY EXAMINER